performance of the repair, pending resolution of request for relief, claim, appeal, or action relating to the dispute, and subsequently comply with the decision of the CO. All appeals and claims will be processed in accordance with the "Disputes Clause" of the contract.

7. WATER TREATMENT:

General: The Contractor shall propose and submit a comprehensive water treatment program to the COR **30 days after contract start.** The water treatment program shall include treatment, chemicals and procedures for the building heating water, chilled water, condenser water, and glycol closed loop condensing water systems. The Contractor shall provide all equipment, chemicals, materials, parts, pumps, piping, metering devices and services, including application, required to control corrosion, scale, fouling, algae and slime in all building water systems that use water as primary or secondary refrigerant. Algae, slime, and bacterial growth shall be prevented by the Contractors water treatment program by using suitable chemicals (algaecide or biocide). Chemicals may be fed continuously into water circulation using automatic feeding devices. The following also applies:

(a) Approval: Chemical treatment of any system shall not be started until the Contractor's water treatment program is submitted to and approved by the COR in writing. However, the Contractor is required to continue with the Government's existing water treatment procedures that are in effect at contract start, until such time as the Contractor's proposed water treatment program is accepted by the COR.

(b) Initial Water Analysis: The Contractor shall submit to the COR an initial water analysis report on existing water conditions and proposed water treatment program for all water systems **15 calendar days after the contract start date.**

(c) Changes: The Contractor shall submit supplemental reports to identify any changes in the water treatment program as they occur.

(d) Water Samples: On a **weekly basis**, the Contractor shall draw one complete set of water samples from all water systems. These water samples shall be tested and analyzed by, or under the supervision of, a qualified chemist approved by the COR. The COR shall be notified when such samples are to be taken.

(e) Reports: The Contractor shall provide a report containing all pertinent information relative to the conditions found. **A copy of the water analysis report shall be submitted to the COR weekly (by close of business Friday)** identifying the chemical residual

balances in each system. These balances shall identify in parts per million (PPM), parts per billion (PPB), and other acceptable standards of measurement for all to other relevant system conditions, i.e. pH, conductivity, total dissolved solids, suspended solids, cycles of concentration, and any other relevant system conditions that should be disclosed. The report shall also include any adjustments that have been made to the systems to provide necessary corrective actions.

(f) **Duplicate Samples:** Monthly, the Contractor shall provide a second set of water samples to the COR, along with the accompanying water analysis report. Water samples shall be placed in plastic 8 ounce bottles with leak proof caps. The bottles shall be filled completely, shall be free of contamination and shall identify the building where the sample was taken from, the water system, and the chemicals used in the system being tested. Government personnel shall deliver water samples, along with the Contractor's water analysis report to the HOTA Lab in Arlington, Va. on **the 3rd Monday of each month.** The Government shall provide a copy of the HOTA Lab test results to the Contractor and the Contractor shall respond, in writing, as to the action (s) taken to correct any deficiencies identified in the HOTA Lab test results.

(g) **Warranty:** The Contractor shall warrant that the chemicals used in the Franconia Warehouse Buildings will not endanger the health or safety of persons coming into contact with them, and that these chemicals will not harm or damage personal property or real property. The Contractor shall also warrant that all chemical used in the program will not have any detrimental effect on the metallic, nonmetallic, and wooden materials used in the equipment being treated. Any discharges of chemicals to surface waters or sanitary sewers must be in compliance with current regulations for such discharges as determined and administered by the District of Columbia, the Washington Suburban Sanitary Commission (WSSC), and the Environmental Protection Agency (EPA).

(h) **Cleaning Government Owned Equipment:** Where temperatures, pressures, or other operating data indicate that the Contractors scale control program is not adequate, the Contractor shall clean the Government's affected equipment immediately, check the water treatment for accuracy, and thereafter maintain temperatures, pressures, and other pertinent factors within the design limits specified by the manufacturer of the Government's equipment.

(i) **Water Treatment Program Monitoring:** The relevant conditions of all water systems shall be monitored on a continuous basis by a

microprocessor. The Contractor shall provide and install all necessary hardware and software to provide a continuous information database. Data gathered by the microprocessor shall include the chemical treatment drum levels, water conductivity, water temperatures, water flow rates, system pH, cycles of concentration, total dissolved solids, gallons of makeup water added to each system that is in service. This information shall be recorded and stored in the microprocessor memory on an hourly basis. Water system(s) conditions that indicate improper or out-of specification conditions shall be alarmed. The Contractor shall check alarm status every 2 hours via telephone modem. The Contractor shall correct all alarmed conditions to ensure proper chemical treatment levels are maintained by performing a site visit within 24 hours of receiving the alarm indication, and shall take appropriate corrective actions to return the system to normal conditions. A hard copy report of the microprocessor; continuous monitoring, corrective actions taken, and any other information on system conditions shall be provided to the COR by the **close of business each Monday,** for the previous week.

(j) **Corrosion Coupons:** The Contractor shall provide and install metal coupons in each open and closed water system that are part of this contract. Coupons shall be installed to the extent that each metal in each system being treated is represented with a coupon of the same composition of ferrous an non-ferrous materials used in the construction of each of the water system components. Coupons shall be replaced and corrosion rates determined every 60-calendar days of system operation. The Contractor at no additional cost to the Government shall perform any necessary water treatment program adjustments that should be taken (as determined by the coupons measured corrosion rates). This information shall be included with the weekly written system analysis reports at 60-calendar day reporting internals.

8. PRESSURE VESSEL AND BOILER INSPECTIONS:

General: The Contractor shall be responsible for having fired and un-fired pressure vessel and boiler inspections accomplished by certified personnel, in accordance with the COR approved schedule and for providing and posting completed inspection certifications on or adjacent to each pressure or boiler in the building. The Contractor shall provide the inspection schedule for fired and un-fired pressure vessels **thirty (30) days after contract start date** to the COR for approval.

A. UNFIRED PRESSURE VESSEL INSPECTION:

(1) The Contractor shall inspect all unfired pressure vessels operating at a pressure in excess of 60 p.s.i. and having a capacity in excess of 15 gallons annually.

(2) Inspections shall be made by inspectors certified by the National Board of Boiler and Pressure Vessel Inspectors and employed by independent firms specializing in boiler and unfired pressure vessel inspections.

(3) The Contractor shall require inspectors to use a GSA Form 350, Inspection Report of Unfired Pressure Vessels for each unfired pressure vessel inspected. Completed GSA Forms 1034 shall be posted on or near inspected equipment within **15 days** after each inspection. The Contractor shall provide copies of all pressure vessel certificates to GSA for filing in contract file **15 days after inspection.**

B. FIRED PRESSURE VESSEL INSPECTION:

(1) The Contractor shall inspect all fired pressure vessels annually.

(2) Inspections shall be made by inspectors certified by the National Board of Boiler and Pressure Vessel Inspectors and employed by an independent firm specializing in boiler and unfired pressure vessel inspections.

(3) The Contractor shall require inspectors to use GSA Form 349, Inspection Report of Boiler for each boiler inspected. Completed GSA Forms 1034 shall be posted on or near inspected equipment **within 15 days** after each inspection, The Contractor shall provide copies of all pressure vessel certificates to GSA for filing in contract file **15 days after inspection.**

9. CRITICAL EQUIPMENT AND SYSTEMS:

A. General: All equipment and systems listed in Part III, Section J, Exhibit 1 of this contract are considered critical for preventive maintenance purposes as delineated in the performance work statement of this contract. However, this list is not inclusive of all building equipment and systems that are the Contractor's responsibility to operate, maintain, and repair. The responses and corrective actions, repairs, and operations for **all** building support equipment installed in the Franconia Warehouse Buildings.

10. MONITORING, MAINTENANCE AND TESTING OF FIRE ALARM SYSTEM:

The Contractor shall connect the fire alarm system to a UL listed central station service. This shall include all work necessary so that all fire alarm signals (including alarm, trouble, and supervisory signals) are sent from the Franconia Warehouse Building fire alarm system to a UL listed central station service acceptable to the COR. Maintenance and testing of the fire alarm system shall

be performed in accordance with the NFPA 72 and the equipment manufacturer's instructions. Maintenance of water-based fire protection systems shall meet the requirements of NFPA 25 and manufacturer's instructions. The Contractor shall maintain documentation of all inspections, maintenance and repairs to the building fire alarm system equipment and provide this documentation to the COR upon request.
(See Section C, Par. D3, "Building Equipment and Systems" for fire alarm systems, fire extinguisher items not included as part of this contract).

The following two (2) subparts are the labeling and inventory guides for the Contractor's use in maintaining the Access equipment inventory and preventive maintenance programs at the Facility.

Subpart #1 Equipment Labeling:

This part shows how mechanical equipment is labeled in GSA buildings. The labeling of building operating equipment begins with the classification designation, a letter (equipment type) - a number (size) which are listed in detail in Subpart #1. Added to the letter - number designation will be the quantity number that each individual piece of equipment represents.

An example would be A-4-1. The A-4 is the equipment classification designation and the number 1 is the quantity this A-4 represents. A second piece of A-4 equipment would be labeled A-4-2; a third A-4 would be labeled as A-4-3, and so forth.

Subpart #2 Equipment Listing:

This subpart demonstrates the method by which all mechanical equipment is to be identified in GSA's Access based inventory program. The Contractor will be provided a copy of the GSA Access based inventory software program, and equipment inventory.

The Contractor shall use the Access based automated preventive maintenance program derived from the inventory information.

Equipment Labeling - Classification

Guide No.	Item	List Each Unit	List Total Number in Bldgs.	Remarks
A-1	Air Dryer, Refrigerated or Regenerative Desiccant Type	X		
A-2	Unitary, Heating and Cooling Unit	X		
A-3	Humidification Systems	X		Give mfr., type of mist, and lbs. Per hour/gallons per hour
A-4	Air Compressor	X		Give mfr. And H.P.
A-5	Air Conditioning Machine, Split System	X		
A-6, A-7	Machine-Package Unit	X		Give mfr. And tonnage
A-8	Air-Conditioning Window Unit		X	
A-9	Air Cooled Condenser	X		Give mfr. And capacity in tons
A-10	Heat Pumps	X		Give mfr. And capacity in tons
A-11	Air Handler	X		Give mfr. And CFM of air handled
A-12	Glycol Dry Cooler	X		Give mfr. And tonnage
A-13	Air Conditioning Unit, Ceiling/Wall Mounted	X		Give mfr. And tonnage
A-15	After-Cooler/Separator	X		Give mfr. And tonnage
A-24	Ash Conveyor Tube (pneumatic and hydraulic), Per Tube Section	X		Give mfr. And tonnage
B-1	Battery Charger	X		Give mfr. And voltage
B-2	Boilers, Coal, Oil, and Gas	X		Give type; identify hot water or steam, mfr., and lbs. Of steam per hour/BTU's
B-3	Burner, Gas	X		Give mfr. and BTU's per hour
B-4	Burner, Oil	X		Give mfr. and BTU's per hour
B-5	Electric Boilers	X		Give mfr. and BTU's per hour
B-6	Boiler Instruments/Controls	X		
C-1	Clocks, Electric, Central System		X	Give mfr. and no. of masters and submasters
C-2	Remote Air Intake Dampers	X		Give sq. ft. of opening
C-3	Coils, Preheat, Reheat. Etc. (Remote Locations)	X		Give sq. ft. of exposed areas; Applies to coils not a part of AHU
C-4	Central Mini-Computer, HVAC	X		Give mfr., model no., and control points
C-5	Automatic Mixing Box Pneumatic or Electric		X	Give duct size
C-6	Controls, Central System, HVAC		X	Give no. of controls by type in system
C-7	Condensate or Vacuum Pump	X		Give mfr. and motor H.P. of each
C-8	Central Control Panel	X		Give mfr. and indicate pneumatic or electric
C-9, C-10	Cooling Tower	X		Give mfr. and tonnage; Unit includes fan motors, etc.
C-11	Evaporative Condenser	X		Give mfr. and tonnage
C-13	Crane, Electric	X		Give mfr. And wt. limits
C-14	Chain Hoist and Trolley	X		Give mfr. and wt. limits
C-16	Cooling Pond (Suitland, MD, heating and cooling plant only)	X		Give mfr. and tonnage
C-21	Carts and Scooters, Engine or Battery Powered	X		Give mfr.
C-24	Condensing Unit, Refrigeration	X		Give mfr. and tonnage

D-1	Door, Power [illegible]rated (Warehous[illegible]verhead)	X		mfr. and type
D-2	Dumbwaiter	X		Give mfr. capacity, no. of floors serviced; complete GSA Form 1231
D-3	Drains, Roof, Gutter Downspouts, etc.		X	Give linear ft. of guttering, no. of downspouts, and no. of drains
D-4	Door, Automatic-Hydraulic, Electric or Pneumatic Operated Main Entrance	X		Give manufacturer
D-5	Doors, Main Entrance	X		List total no. of doors at each entrance
D-6	Drains, Areaway, Driveway, Storm	X	X	List total no. of doors at each entrance
D-9	Distiller, Water, (Laboratory use only)	X		Give mfr.
D-10	Door, Manual, Overhead	X		Give mfr.
E-1 to E-12	Elevator, Electric	X		Give mfr., no. of floors serviced; Complete GSA Form 1231
E-15, E-16	Escalator	X		Give manufacturer; complete GSA Form 1231
E-17	Expansion Joints in Piping		X	Give no. by pipe size and type of packing
E-18	Emergency Lights (Wet Cells)		X	
E-19	Emergency Lights (Closed Systems)		X	
E-20 NIC	Induction Disc Over Current Relay	X		Give mfr., model no./serial no., voltage and amp. Rating, and trip devices
E-21NIC	Over and/or Under Voltage Relay	X		Give mfr., model no./serial no., voltage and amp. Rating, and trip devices
E-22NIC	Thermal Over Current Relay	X		Give mfr., model no./serial no., voltage and amp. Rating, and trip devices
E-23NIC	Induction Disc Directional Over Current Relay	X		Give mfr., model no./serial no., voltage and amp. Rating, and trip devices
E-24NIC	Power Factor Reverse Current, or Watt Type Relay	X		Give mfr., model no./serial no., voltage and amp. Rating, and trip devices
E-25NIC	Ground Fault Type Transformer or Differential Relay	X		Give mfr., model no./serial no., voltage and amp. Rating, and trip devices
E-5ANIC	Bolted Pressure Contact Switch (low voltage)	X		Give mfr., model no./serial no., voltage and amp. Rating, and trip devices
E-27NIC	Low Voltage Power Circuit Breaker - (Over 50 Amps)	X		Give mfr., model no./serial no., voltage and amp. Rating, and trip devices
E-28NIC	Motor Starter, 100 Horsepower and Up	X		Give mfr., model no./serial no., H.P. and voltage and amp. Rating,
E-29NIC	High Voltage Oil Circuit Breaker	X		Give mfr., model no./serial no., voltage and amp. Rating,
E-30NIC	Switchboard (Per Cubicle)	X		Give mfr., model no./serial no., and no., of cubicles on board
E-30A NIC	Switchboards (per cubicle), Low Voltage	X		Give mfr., model no./serial no., and no., of cubicles on board
E-31NIC	Network Protectors	X		Give mfr., model no./serial no., voltage and amp. rating, and oil type
E-32NIC	High Voltage Network and Power Type Transformer (Oil Filled)	X		Give mfr., type model no./serial no., voltage and amp. rating, and oil type
E-33NIC	High Voltage Network and Power Dry Type Transformers	X		Give mfr., type model no./serial no., voltage and amp. rating
E-34NIC	Disconnects (Isolating Switch)	X		Give mfr., and voltage and amp. rating
E-34ANIC	Disconnect or isolating switch, low voltage			
E-35	Motor Control Center (Motor Starters Under 100 H.P. are Included)	X		Give mfr., size, rating, and no. of motor starters included
E-36	Automatic Transfer Switch			

E-37	Aluminum P uct and Connectors	X		e mfr., rating, no. of disconnects, no. of keoffs, and no. of 10' sections
E-38	High Voltage Air Circuit Breaker	X		Give mfr., model no./serial no., and voltage and amp. rating
E-39	Supervision Set	X		Give mfr., model no., and total devices supervised
E-40, E-42	Emergency Generator, Gasoline or Natural Gas Engines	X		Give mfr., KVA, KW, voltages, and phases (single or 3 phase)
E-41, E-42	Emergency Generator, Electric Diesel Power	X		Give mfr., H.P., KVA, KW, voltages and phases (single or 3 phase)
E-43NIC	Lead Acid Battery	X		Give no. of cells
E-44	Edison Nickel-Iron-Alkaline Battery	X		Give no. of cells
E-45	Emergency Generator Steam Turbine Driver	X		Give mfr. And Hp
E-49	Emergency Pump or Ventilator	X		Give mfr. and Hp
E-50	Emergency Pump or Ventilator	X		Give mfr. and Hp
E-51	Motor Starter, 5 hp to less than 100 hp and less than 600 volts (formerly E-35A)	X		Give mfr., Hp, and Voltage
E-52NIC	Auxiliary Protective Relay	X		Give mfr.
E-56	Dimmer and Control, Stage and General Lighting	X		Give mfr.
E-57NIC	Low Voltage Dry Type Transformer (30 KVA and up, 600 volts or less)	X		Give mfr. And Voltage
F-1	Alarm Check Valves and Accessories	X		Give operating water pressure; Unit includes retard chambers, jockey pumps, etc.
F-2	Dry, Pipe, Deluge and Preaction Valves	X		Give type and valve size
F-2A	Dry, Pipe, Deluge and Preaction Valves	X		Give mfr. and size
F-2B	Dry, Pipe, Deluge and Preaction Valves	X		Give mfr. and size
F-3	Fire Post Indicator Valves	X		Give valve size
F-4	Fire Control Valves (4 Inch or Over) for interior Water Distribution Systems	X		Give valve size and type of system
F-5, F-6	Fire Pump (Motor or Engine Driven)	X		Give pump mfr., capacity and operating pressure
F-7	Fire Pump (Motor or Engine Driven)	X		Give type, mfr., engine/motor H.P.; Denote automatic or manual starting device, if any
F-8	Fire Hose (1 1/2 In. Racked in Bldgs.)	X		
F-9	Fire Department Hose Connections (Standpipe or Outlets)	X		Give size
F-10	Fire Department Hose Connections (Standpipe or Sprinkler	X		Give type and size
F-11	Fire Doors - Stairwells and Exit ways (Swinging)		X	Give rating information
F-12	Fire Doors - Sliding Type	X		Give actuating device (Fusible Link, etc.)
F-13NIC	Fire Supervisory Signal - Testing	X		Give type of supervision
F-14NIC	Automatic Fire Detection or Alarm Devices	X		Give type
F-15NIC	Fire Alarm System - Control Boards	X		Give mfr. and model no.
F-15ANIC	Fire Alarm Control Panel Special Systems	X		Give mfr. and model no.
F-15BNIC	Central Station, Transmitters	X		Give mfr. and model no.

F-15CNIC	Central Stat Transmitters, Retransmitters	X		mfr. and model no.
F-16NIC	Fire Alarm System - Recorders	X		Give mfr. and model no.
F-17NIC	Fire Alarm Boxes (Manual - Code and Uncoded)	X		Give mfr.; Denote whether coded or uncoded
F-18	Fire and Smoke Dampers	X		Give type and duct size
F-19	Fire Hydrants (Dry Barrel or Wet Barrel)	X		Give type
F-20	Sprinkler Heads - Sprinkled Areas	X		List all sprinkled areas including areas supplied by domestic water (trash rooms); Give area of each in sq. ft.
F-21,NIC F-24NIC	Fire Extinguisher - Soda Acid or Foam		X	Give type and capacity
F-22,NIC F-24,NIC F-25NIC	Fire Extinguisher - Stored Pressure with Gauge		X	Give capacity
F-23,NIC F-24,NIC F-25NIC	Fire Extinguisher - Gas Cartridge or Cylinder (No Gauge)		X	Give capacity in lbs. and no. of each type
F-26NIC	Fire Extinguishing System - Carbon Dioxide (High Pressure), Halon, Dry Chemical	X		Give no. of tanks and capacity
F-27	Fan, Centrifugal	X		Give mfr., CFM, and H.P. of motor
F-28	Filter, Movable Curtain, oil Coated	X		Give mfr., and sq. ft. of exposed area
F-29	Filter, Roll Type, Disposable Media	X		Give sq. Ft. Of exposed surface and any special requirements of media, such as oil coating, etc.
F-30	Filter, Viscous Type (Wire Mesh)		X	Give mfr. and size
F-31	Filter, Roll Type, Disposable Media, Manual or Motor Driven	X		Give mfr. and size of roll
F-32	Filters, Throw Away		X	Give mfr. and size
F-33	Filter, Electrostatic	X		Give mfr., and grid voltage
F-34, F-35	Fluorescent Light Fixtures		X	Give mfr., type, lamp length, and no. lamps per fixture
F-36	Fan, Propeller, 24 In. Diam. or Larger	X		Give mfr., size, and H.P. of motor
F-37	Floor Polishing Machine	X		Give mfr., model no., and brush size
F-38	Lighting Protection	X		Give location and no. of down conductors
G-2	Grease Traps	X		Give size
H-1	Hot Water Converter (Steam)	X		Give size, capacity, and BTU's
H-2	Hot Water Heaters - Gas	X		Give capacity
H-3	Hot Water Heater - Electric	X		Give capacity
I-1	Incinerator	X		Give mfr., and size or capacity
I-2	Fan Coil Unit, under Window Type		X	
I-3	Induction Units, Under Window Type		X	
L-1	Lawn Mower Edger	X		Give mfr., type, size, and motor H.P.
L-2	Loading Ramp, Adjustable	X		Give mfr. and capacity
L-3	Lighting, Special Fixtures		X	Give type, no. of fixtures and height above floor
L-4	Lighting, Outside	X		Give type, no. Of lights, transformers, and height from ground
L-5	Lawn Sprinklers		X	Give area in sq. ft. and no. of nozzles
M-1	Manholes, Electrical		X	
M-2	Manholes, Sewer		X	
M-3	Motors	X		Give mfr., and H.P. of each
P-1	Paper Baler	X		Give size of bale
P-1	Paper Bailer	X		Give size of bale
P-4	Pump, Centrifugal (Not	X		Give motor H.P. of each and function of pump

	Integral with ' 'or)			
R-1	Radiators, F .g		X	ate one or two pipe system
R-2	Roofing Inspection		X	Give total sq. ft. of roof
R-3	Refrigeration Machine (Absorption Type)	X		Give mfr. and tonnage
R-5	Refrigeration Machine (Centrifugal and Reciprocating)	X		Give mfr., tonnage, and motor H.P.
R-10	Railroad Trackage		X	List linear feet of two rail track in the yards and sidings within the depot; exclude railroad company property
R-12	Railroad Turnouts		X	List of switches in the yards and sidings within the depot; exclude railroad company property
S-5	Sweeper	X		Give mfr., type, and size
S-7	Sump Pump	X		Give mfr. and H.P. or motor
S-10	Scrubbing Machine	X		Give mfr., type model no., and size
S-11	Snow Blower	X		Give mfr., model no., and reel size
T-1	Tanks, Water (All Types)	X		Give approx. Capacity of each; indicate type (HW, CW, etc.)
T-3	Tank, Oil Fuel Storage	X		Give capacity
T-5	Trash Compactor	X		Give mfr. And capacity
T-8	Traps, All Types		X	Give no. By pipe size, type, and high or low pressure
T-9	Turbine, Steam, High Pressure	X		Give make and size
U-1	Unit Heater (Steam and Hot Water)	X		Give size or capacity of each and motor H.P. Indicate steam or hot water
U-2	Unit Heater (Gas and Oil Fired)	X		Give size or capacity of each and motor H.P.
V-1	Vacuum Cleaner, Heavy Duty, Tank Type		X	Give mfr., and model no.
V-3	Valve, Regulating		X	Give type
V-5	Valve, Manually Operated		X	Give location, size of main or critical valves, and list number of other valves over 2 in. By size (See fig. 2-2.2)
V-6	Valve Motor Operated	X		Give no. By size, type, and motor H.P.
W-1	Drinking Water Filter Systems	X		Give filter material and flow rate
W-3	Water Softener	X		Give mfr., type, and capacity
W-5	Window Washing Scaffold, Power Operated	X		Give height of building and approx. Length of track.
W-2	Wash, Emergency			
W-4	Filter, Water			
W-7	Wheelchair Lift			
W-8	Water Treatment for Cooling Towers			
W-9	Water Treatment			
X-21	Key Card System			
X-23	Heater Unit, Electric			
X-29	Chemical Feeder			
X-32	Parking Arm Gates			
X-37	Emergency Shower			

The Contractor will develop, and submit to the COR for approval, supplemental guides for equipment not covered under the items listed in this SUBPART.